



INTERNET REMOTE CONTROLLER AND CONTROLLING METHOD FOR HOME APPLIANCES USING THE SAME

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates to an internet remote controller for connecting electric home appliances to the internet, in particular to an internet remote controller and a method of controlling such appliances using the same, which is capable of receiving needed information from a web-site through the internet and transferring the information easily without any additional apparatus to electric home appliances such as a cooking apparatus which are bulky and wherein the information is difficult to transfer.

Description of the Prior Art

[0002] In these days, people live conveniently more so than at any other times by using a lot of appliances that provide conveniences to human lives based on striking development of electronic technology. For example, speed of electric home appliances and communications is outstanding due to the advent of the Internet.

[0003] Likewise, developments in electric home appliances and communications not only involves making a new product but also involves betterment of conventional products in order to use them more efficiently, and co-ownership of information is possible all over the world by using the Internet.

[0004] In addition, it is possible to provide a new information

communication service such as a bidirectional communication owing to ease of connection by use of a broadcasting network and a communication network commonly with the introduction of a computer technology. A combination of communication appliances and a personal computer and electric home appliances has occurred.

[0005] Microwave ovens have a shorter history than do television sets, microwave ovens were invented for reducing cooking time in a versatile modern society at present, various foods cookable by the microwave oven are being developed, and the cooking range of microwave ovens is gradually expanding.

[0006] Based on expansion of the cooking range of this cooking apparatus, the list of cookable foodstuff can be displayed on the front surface of the microwave oven and a switch type provided for cooking the food corresponding to press of the pertinent button. In such a case, the construction of the cooking device can be complicated and it may be difficult to follow the increased list of the cookable food. Accordingly the cooking contents may be displayed on an LCD panel in accordance with types of cooking apparatus, or a cooking apparatus may display first typical cooking foods and use a simple time adjusting switch.

[0007] However, such systems have problems. First, as more specialized cooking information is included in the apparatus, its usage is more complicated and it is difficult to get an up-grade of system. Accordingly it is hard to adapt a new cooking method to the cooking apparatus. Second, as the cooking apparatus is simplified, it is difficult to adjust the oven in accordance with various foods. Accordingly it is impossible to perform delicious cooking.

[0008] However, at present the above-mentioned products are few, but it

expands the function region of different appliances besides their conventional functions by combining and intellectualizing mutually communication and network technology.

[0009] For example, a television set used to unilaterally output an image transmitted from a broadcasting station can perform bilateral communication with a receiver using a communication port and an information input/output device. As depicted in FIG.1, a cooking device such as a microwave oven can solve the aforementioned problems by expanding the functions.

[0010] The invention is described in more detail with reference to accompanying FIG.1.

[0011] First, the present invention comprises a personal computer 1 for downloading required information from various information providing companies connected through the internet, a cooking apparatus 2 for cooking foods, and a transmission device 3 for loading the required cooking information to the cooking apparatus 2 by connecting the personal computer 1 and cooking apparatus 2 through a communication line.

[0012] Hereinafter, the operation of the apparatus according to the present invention will now be described.

[0013] First, the cooking apparatus 2 can download the required cooking information from the personal computer 1 through the transmission device 3 performing a serial communication by a RS-232C at any time, the personal computer 1 receives and stores the cooking information provided from the professional cooking company, when a user needs it, the user can search the cooking information and perform the cooking by loading the information to the cooking apparatus 2 through the transmission device 3.

[0014] In other words, the cooking apparatus 2 only comprises a simple adjustment switch, the detailed cooking information according to the food kind is loaded from the personal computer 1 in case of need, accordingly said apparatus is simple to use in normal times and it can also satisfy the various cooking request of a user.

[0015] In addition, whenever new cooking information is upgraded, the personal computer downloads it automatically and stores it or transmits the pertinent information to the cooking apparatus 2 through the transmission device 3. by connecting directly to the web-site (home page) of the professional cooking company, because the personal computer 1 is connected to the internet network,

[0016] Herein, the transmission device 3 can be embodied as an outer packaging or can be embodied as a built-in type of the cooking apparatus 2.

[0017] However, as described above, the conventional transmission device does not have a good appearance and it is annoying to install its wiring because the transmission device independently connects to the personal computer, downloads the information, stores it, again connects to the cooking apparatus, and transmits the information to the cooking apparatus as a information storing means and a communication means or it is embodied as a built-in type inside of the cooking apparatus and it is connected to the personal computer by wiring.

SUMMARY OF THE INVENTION

[0018] In order to solve above-mentioned problems, the object of the present invention is to provide an internet remote controller and controlling method for home appliances using the same which is capable of easy use performing

more functions, and permitting receipt of an upgrade easily with new information by downloading the information to the remote controller and transmitting the information required for controlling appliances with a control command in order to give convenience to modern people familiar with the remote controller.

[0019] In order to achieve its objects, the present invention comprises a transmission/reception unit interfaced with a personal computer connected to the internet and having a data output device in order to transmit or receive data according to control of a control unit, and the control unit for controlling a control object to be controlled or the personal computer in order to transmit/receive selectively a control order or data according to operation of a switch.

[0020] In addition, controlling method for appliances by using the internet remote controller according to the present invention comprises a downloading step for downloading the required data from an information providing company through a personal computer connected to the internet, a receiving step for receiving and storing the required data on an internet remote controller by connecting directly or remote-connecting to the personal computer, and a transmitting step for transmitting the stored data and control commands of home appliances to the corresponding control apparatus to be controlled.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] FIG.1 illustrates a system that can use a control method of home appliances according to conventional control information transmission.

[0022] FIG.2 illustrates a system that can use a control method of an Internet remote controller according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0023] Hereinafter, the various exemplary embodiments of the present invention will now be described in detail with reference to accompanying drawings.

[0024] First, as depicted in FIG.2A, in the present invention, the system and operation method for information transmission are simplified in that the function of a conventional transmission device is performed by a remote controller RC.

[0025] In FIG.2A, a personal computer 1 comprises an output device 10 for downloading the required information from an information providing web site through the internet and for outputting it to an adapter or an infrared (IrDA) transmission device.

[0026] As depicted in FIG.2C, the remote controller RC comprises a transmission/reception unit 20, 40 for transmitting or receiving the information by interfacing with the output device 10, and a control unit 50 for storing the information received through the transmission/reception unit 20, 40 and for controlling the information so as to transmit/receive selectively the control command or information data in accordance with the operation of a switch 30.

[0027] Hereinafter, the preferred embodiments using the controlling method of the home appliances according to the present invention will now be described.

[0028] First, in case the output device 10 provided in the personal computer 1 has an adapter form, the information is transmitted by inserting the remote controller RC into an adapter, at that time the information is inputted

through the transmission/reception unit 40 of the remote controller RC.

[0029] FIG.2B illustrates that the remote controller is inserted into the adapter 60.

[0030] After inserting the remote controller RC into the adapter 60, the information transmission command is performed by operating a keyboard (not shown) of the personal computer 1, accordingly the information data is transmitted to an object to be controlled through the transmission/reception unit 40.

[0031] In addition, in case the output unit 10 is an infrared transmission unit, the information can be received without inserting the remote controller RC into the adapter 60. Accordingly, such a system is simple to use.

[0032] After coinciding the infrared output direction of the output unit 10 with the infrared reception direction of the remote controller RC, the information data is transmitted to the control object through the transmission/reception unit 20 on an information transmission command is executed by operating a keyboard of the personal computer, like the situation of said adapter (60), as mentioned above, after switching into the information reception mode by operating the switch 30 of the remote controller RC.

[0033] After that, if the amount of the inputted information is relatively small, the information can be stored on a built-in memory of the control unit 50. When the amount of inputted information is large, the information can be stored by attaching a memory (not shown) additionally.

[0034] In this manner, when the information is stored on the remote controller RC, a user positions the transmission/reception unit 20 of the remote controller RC toward the apparatus to be controlled (in the present embodiment, the cooking apparatus 2); after that when the user pushes a start switch 30, the

control unit 50 detects it, and it transmits the stored information and a cooking start command together.

[0035] According to this, the cooking apparatus 2 stores the information transmitted from the remote controller RC on the built-in memory, and performs the cooking at the same time with the reception of the cooking start order according to the predetermined order.

[0036] Internet remote controller in the present invention can perform the remote-control of home appliances to be controlled, even through the cooking apparatus is far apart from the computer, accordingly the apparatus in the present invention is very convenient and is simple to use.

[0037] Because the cooking apparatus 2 comprises an infrared reception unit for the information reception besides a simple switch for the basic operation control, accordingly the manufacturing cost can be reduced and it can exert the high performance.

[0038] The present invention can be adapted to various electric home appliances such as a washing machine, a refrigerator, a television set, a VTR etc. as well as a cooking apparatus. In addition, when a user wants to control the contents of electric home appliances such as the laundry, programs etc. by subdividing their operation conditions into many conditions, the structure of the apparatus can be constructed as simple as possible, and its functions can be increased by as many as possible.

[0039] As described above, the internet remote controller and control method of home appliances using the same according to the present invention is capable of satisfying a user's needs and uses easily by transmitting required information from a web site through the Internet and adapting it to an apparatus

which is bulky and wherein the information is difficult to transfer such as in a cooking apparatus without a special additional apparatus. In addition, the present invention can be adapted widely to electric home appliances such as television sets, washing machines, refrigerators, VTR etc.